

# Notice of Allowability

Application No.

10/092,740

Examiner

Andrew C. Flanders

Applicant(s)

FAY ET AL.

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 01 March 2006.
2. ☒ The allowed claim(s) is/are 1,3-28,30-32,34-41 and 45-54.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**DETAILED ACTION**  
**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Morasch on 12 May 2006.

The application has been amended as follows:

Please amend claim 1 to read:

An audio buffer, comprising:

a first audio effect resource configured to receive audio data from an audio data source and modify the audio data to generate modified audio data that is routed to at least one additional audio buffer; and

at least a second audio effect resource configured to receive the modified audio data from the first audio effect resource and further modify the modified audio data to generate a modified audio data output of the audio buffer the modified audio data output and an additional modified audio data output of the additional audio buffer being

combined in an output mixing component that streams the combined modified audio data to an audio rendering component.

Please amend claim 41 to read:


A method for processing audio data, comprising:

- receiving a stream of audio data from an audio data source;
- modifying the audio data with an audio effect resource in an audio buffer to generate modified audio data;
- routing the modified audio data to at least an additional audio effect resource in the audio buffer to further modify the modified audio data to generate a modified audio data output of the audio buffer;
- routing the modified audio data from the audio effect resource to an additional audio buffer that generates an additional modified audio data output;
- combining the modified audio data output from the audio buffer with the additional modified audio data output from the additional audio buffer in an output mixing component that generates a stream of combined modified audio data; and
- communicating the stream of combined modified audio data to an audio rendering component that produces an audio rendition corresponding to the stream of combined modified audio data.

***Allowable Subject Matter***

Claims 1, 3 – 28, 30 – 32, 34 – 41, 45 – 54 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims 1, 17, 32 and 41 generally claim an apparatus or method of ~~an audio~~  ~~claim~~ an audio buffer with a first and second audio effect resource. The first audio effect resource modifying audio and routing it to an additional audio buffer. The second audio effect resource of the audio buffer also receives the modified audio data from the first audio effect resource and further modifies it. The modified audio data output from the audio buffer and the additional modified audio data output of the additional output buffer are then combined in an output mixing component.

The closest prior art of record is considered to be DirectX (Microsoft Press Inside DirectX Version 5.2), Abrams (U.S. Patent 6,658,309) and Tamura (U.S. Patent 6,180,863)

DirectX discloses multiple audio buffers that provide single effects. None of the buffers in DirectX have the ability of providing multiple effects. DirectX also does not disclose the routing detail claimed by Applicant. Once a buffer in DirectX applies an effect, no further effects are implemented. Thus DirectX fails to disclose a second audio effect resource of the audio buffer also receives the modified audio data from the first audio effect resource and further modifies it.

Previously the Abrams reference was referred to in order to show a series of effects and thus the DirectX reference was modified to place a plurality of buffers in a

series fashion to show multiple effects being performed on audio data. This is shown in figure 10 of Abrams and col. 6 lines 6 – 31, a cascaded series of effects is shown.

New limitations now require a first and second audio effect resource within one buffer. The modified audio data from the first audio effect is then passed to an additional audio buffer.

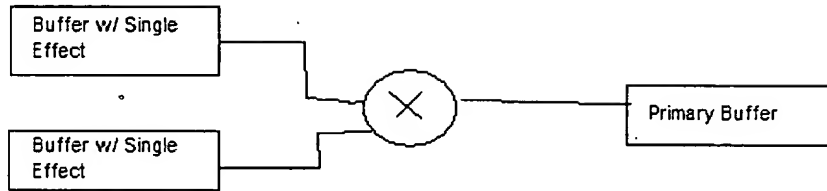
If one were to make a combination of DirectX in view of Abrams, Abrams must modify DirectX in three ways:

- 1.) Each buffer must contain multiple effects
- 2.) the first audio effect resource in the audio buffer must route modified audio data to an additional buffer which produces additional modified audio data
- 3.) the additional audio buffer must be able to produce additional modified audio data.

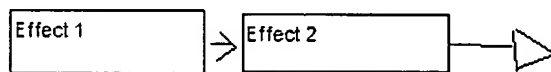
Using the series teaching of Abrams in Fig. 10 as was used in the previous rejections, only 1 of the above modifications can be met at one time as you can either place a plurality of buffers in series or a plurality of effect resources in series. It would not be obvious to do both without using hindsight reasoning.

Essentially, one must use the diagrams shown below of DirectX and Abrams to arrive at the diagram of the claimed invention shown below:

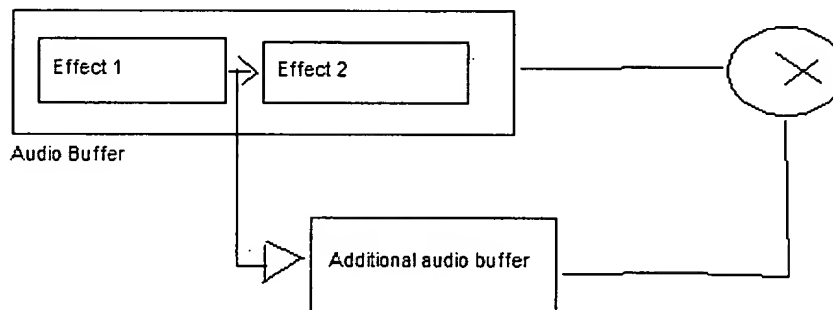
DirectX:



Abrams:



Claimed Invention:



Neither DirectX nor Abrams nor any obvious combination or modification of both discloses the above figure.

Tamura discloses various buffers for holding modified audio data. However, the audio data is modified prior to the buffering as shown in Fig. 7. Thus while multiple buffers hold various modified audio data, the buffers do not produce the data. They merely hold the previously modified data.

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Further, the claims were previously rejected under U.S.C. 101 as including non statutory subject matter. However, upon further consideration, the claims modify audio data thereby "The Claimed invention "transforms" an article or physical object to a different state or thing". Thus, according to the interim guidelines, the claims are considered to contain statutory subject matter.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7546. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

acf



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**